

### ABSTRACT OF THE DISCLOSURE

Flow measuring method and device for measuring the velocity of a single-phase or multi-phase flow. The method includes calculating the flow velocity  $U$  only by measuring consecutive values of pressure  $p$ , temperature  $T$  and momentum  $D$ , and then calculating the change in pressure  $\Delta p$ , change in temperature  $\Delta T$  and change in momentum  $\Delta D$ . The device includes a probe with a housing having electronic components connected to different sensors in the probe. The probe has a long, hollow momentum tube, fastened by its first end to the housing and a hollow, cylindrical sensor tube, located inside the momentum tube fastened by its first end to the first end of the momentum tube. The sensor tube includes plate capacitors located on the outside of the second end, and is thereby able to measure the conductance between the momentum tube and the plate capacitors on the sensing tube. The probe has a pressure sensor and a temperature sensor.